

elements of the process are illustrated in Fig. 7F. Link software 154 preferably works with a timetable, which instructs it when to get information and make automatic updates to the first level database 153-10 (Step 755).

Server 151 is responsible for controlling the betting events, i.e., opening and closing of betting, etc., of all of the authorized users. It receives and accepts bets that have been requested by the users. Server 151 retrieves the results of sports matches by accessing web server 140 under the control of the link software 154 and records the results in a database (not shown). Users can interactively retrieve the results through server 151. Once the results are retrieved and stored, software on server 151 calculates wins and makes payments to the bettors. Electronic accounts stored in the UI database 702 are used for tracking betting wins and losses.

In providing the betting services, the link software 154 takes the data content from the web page(s) 131 and 141 of web servers 130 and 140 and includes it in a first level database 153-10 (Step 756). The data content in first level database 153-10 is used to generate a plurality of different second level databases 153-20, such as Game Database 153-21, user databases 153-22 to 153-24, and News database 153-25 shown in Fig. 7F. (It should be understood that, although the databases are referred to herein as either "first level" or "second level" databases, it may be such (strictly speaking) that there is only one level of data. The terms "first level" and "second level" are meant to refer to the functionalities that are done in the server.) Advertisements and sports analysis databases can also be generated. These and other databases can be used in a variety of systems, such as Gaming System 155, News System 156, and Sports Analyst System 157 shown in Fig. 7G.

A particular aspect of the invention is the generation of a second-level personalization database 153-30 for each authorized user. Information from among the various databases is selected and then shown to the user according to personalization database 153-30 (Step 757).

Each user may utilize any kind of Internet capable terminal device such as a computer 160 with a wired connection (which may be a desktop computer, laptop computer, handheld computer, or Palm™ device) or a mobile device 190 having a wireless connection via Internet

access 170 in mobile network 180. The wireless connection can be made via Bluetooth, a Wireless Local Area Network (WLAN) or GSM/GPRS common access methods.

Preferably, betting provider 150 either executes software which automatically recognizes the type of terminal used by a user and/or permits the user to identify, as part of the registration process, the type of terminal they will normally use, what kind of connection and connection speed is used and what kind of information is desired (e.g., sports). Because the screens of many mobile devices are small, irrelevant information can be removed so that each user of a mobile device gets only their desired information. For example, the user can fill out a questionnaire beforehand and state that they only wish to receive information and make bets with respect to, for example, hockey games.

Alternatively, betting provider 150 may also create data stored in the personalization database by monitoring the user's navigation through the browser and the betting selections. As the user makes a request, such as by clicking on an object, the server 151 registers the subject of the request and responds with an appropriate page based on the request. The system can create the profile by analyzing and processing this historical information. Using the resulting history-based profile, the betting provider 150 displays the bets which best match the user's interests. Also, other already existing personalizing information can be used as an extra source to determine the user profiles.

When a user wants to make a bet and user has already made bets before, the system may already be aware of the type of bets the user likes to do or is likely to do. These bets can be, for example, on a particular subject, such as football, hockey, etc. and what specific team or teams of interest to the user, or if the user is more likely to bet on the home team than the visitor team.

The system preferably creates the profile in the personalization database for every user it identifies and actively updates the personalization information according to the user's actions. The identification can be according to user identity and a corresponding password. Alternatively, if a user uses a device that requires a PIN (Personal Identification Number) and has some kind of SIM (Subscriber Identification Module) or equivalent, the system can easily

identify the person using the device. The password to the betting system may be unnecessary because the system can identify the user according to the predetermined identification information (i.e., PIN & SIM information).

Video and audio streaming of an on-going competition on which viewers may bet is accomplished, in the preferred embodiments, through use of a live video/audio streaming server (VAS) 118. The VAS is connected to a network such as an extranet, intranet, or the Internet 116. A live broadcast 120 of a competition is received through an RF receiver at the server. The audio and video components of the signal are separated and digitized. The digitized audio is then compressed using one of several digital compression schemes, for example, H.728, H.729, or GSM. Likewise the digitized video is compressed using a scheme such as MPEG, MVC, H.261, etc. The digitally compressed audio and video are packaged for network transfer e.g., TCP/IP, UDP. The packets are then broadcast to the network 116 controlled by a streaming/multicasting controller.

The mobile betting client 102 has PIP functionality. This functionality allows the viewer to simultaneously view two audio/video broadcasts in the display of the mobile betting client. The two broadcasts can be, for example, the live-feed of a competition in one picture and interactive betting possibilities in another.

Figure 5 is a diagram depicting a possible interactive display. Directions at the top of the display 502 inform the viewer of the status or title of the interactive activity, in this case, betting. For an application such as betting, a dialog-type box 504 is used to inform the viewer of the current question on which bets can be placed. In the context of an auto race, a question such as "Who will turn the fastest 13th lap" may be presented. A pull-down menu or radio button dialog box 506 may be presented depending on the type of question. In the above example, all of the drivers remaining in the race may be presented in a pull-down menu. Dialog boxes specific to wagering: stakes 508; odds 510; and payout 512, may also be presented. A statement of account 514 with a betting services provider may also be presented. The account is dynamic throughout the competition, registering winnings and debits as each occurs. A response dialog 516 informing the user of bets being received and the current